

## **REMARKS**

This reply is fully responsive to the Office Action dated November 18, 2004.

This response is being filed within three- (3) months following the mailing date of the Office Action.

### **Claims Status Summary:**

Claims 1-15 are pending in the application.

Claims 1-5 were rejected under 35 U.S.C. 102(b) as being clearly anticipated by Smith (5,113,335).

Claims 6-15 were allowed.

Claims 16, and 17 are newly added.

### **I. Claims Rejections - 35 USC §102(b)**

The Office Action rejected claims 1-5 under 35 U.S.C. 102(b) as being clearly anticipated by Smith (USP 5,113,335).

The Office Action states on page 2 that "Smith discloses a filtering that has at least one capacitor (50) and inductor (52) coupled in parallel and the filtering circuit (10) is directly coupled to the AC power supply."

The independent claim 1 recites:

*"A filter circuit, comprising:*

*At least one inductor coupled in parallel with at least one capacitor forming a filtering circuit;*

*said filtering circuit directly coupled in parallel with a power source with no intervening electrical components, and tuned to resonate at a frequency equal to a fundamental frequency of said power source, thereby attenuating most other frequencies on said power line and minimizing power dissipation through said filtering circuit."*

For the purposes of illustration, but not limitation, Fig. 1 of Smith illustrates that the inductor (70, 70', 70") and capacitor (72, 72', 72") combinations of each portions 32, 32', and 32" are coupled in series with one another through nodes 22, 22', and 22". In addition, Fig. 1 further illustrates that the inductor-capacitor combinations of portion 30 (40 and 46, 50 and 52, and 58 and 60) as well as the similar combinations of portions 30' and 30" are also coupled in series with one another through nodes 42, 54, and 22 (for portion 30), nodes 42', 54', and 22' (for portion 30'), and 42", 54", and 22" (for portion 30"). Furthermore, as illustrated, portions 30, 30', and 30" are all in series with one another AND in series with portions 32, 32', and 32" AND in series with portions 30' and 32"; portion 30' is in series with portions 32, 32', and 32" AND in series with portions 30 and 30", and so on. In addition, the figure further illustrates that the parallel combinations of capacitors and inductor (50 and 52) for portion 30, (50' and 52') for portion 30', and (50" and 52") for portion 30" are each coupled in series with power source 12. The same is said for the illustrated parallel combination of capacitors (60, 60', 60") and their respective parallel-coupled inductors (58, 58', 58"). Therefore, all elements in the illustrated circuit are series connected. Hence, the Smith reference does not meet the structural limitation of "...At least one inductor coupled in parallel with at least one capacitor forming a filtering circuit; said filtering circuit directly coupled in parallel with a power source with no intervening electrical components" as is recited in claim 1.

In addition, claim 1 further recites, inter alia, that "... resonant frequency of said filtering circuit tuned to that of a fundamental frequency of said power source, thereby attenuating most other frequencies..." The claimed filtering circuit, therefore, attenuates

(filters-out) any current or signal frequency not at the fundamental frequency of the power source. If the frequency is higher than the fundamental frequency, then current will be drawn (filtered-out) through the capacitor. If the frequency is lower than the fundamental frequency, then current will be drawn (filtered-out) through the inductor. Accordingly, if the resonant frequency of the filtering circuit equals that of the power source fundamental frequency, then the filter will dissipate negligible power because very little or no current will be drawn by the filtering circuit from the power line. Most if not all, current at the fundamental frequency are passed-on from the source to the load.

The Smith reference on the other hand, teaches the opposite. The circuit illustrated in figure 1 is tuned to harmonic frequencies and NOT to fundamental frequency of the power source, as required by the limitation of claim 1. Harmonic frequencies are integer multiples of a fundamental frequency. Fundamental frequency is the "main component" of a signal (i.e. the largest information or power carrying frequency or the lowest or smallest), but NOT a multiple thereof.

Smith discloses in column 6, lines 19+ that "The inductor...and capacitor...combinations of each of portions 32, 32', and 32" form a "resonator" for generating harmonic current for the power supply...In the preferred embodiment, ...each inductor and capacitor combination resonates at a frequency near the sixth harmonic frequency of the power line frequency and has a Q of approximately one to generate current at both the fifth and the seventh harmonic frequencies."

Accordingly, Smith reference does not clearly anticipate, anticipate, teach, or suggest (implied or otherwise) the limitations recited in claim 1, and in fact, it teaches away from them by teaching the opposite.

It is well settled that an anticipatory reference must teach every one of the limitations of the claim(s) alleged to be anticipated thereby. Accordingly, just for the above-mentioned reasons alone, Smith neither clearly anticipates, anticipates, teaches, suggests, nor renders as obvious the recited claim limitations.

However, I have canceled claims 1 - 5 without prejudice in order to expedite the prosecution of this case for an early allowance.

**II. PRIOR ART CITED AND NOT RELIED UPON:**

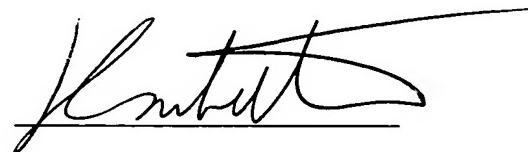
I have reviewed the prior art made of record and not relied upon and believe that the prior art neither anticipates nor renders as obvious any of the claims.

**CONCLUSION**

Having responded to all the rejections set forth by the office action, including the rejection under 35 U.S.C. 102(b), it is respectfully submitted that the case is now in condition for allowance, and an early notification of the same is requested. If it is believed that a telephone interview will help further the prosecution of this case, Applicant respectfully requests that the Examiner contact him at listed telephone number.

Respectfully submitted,

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